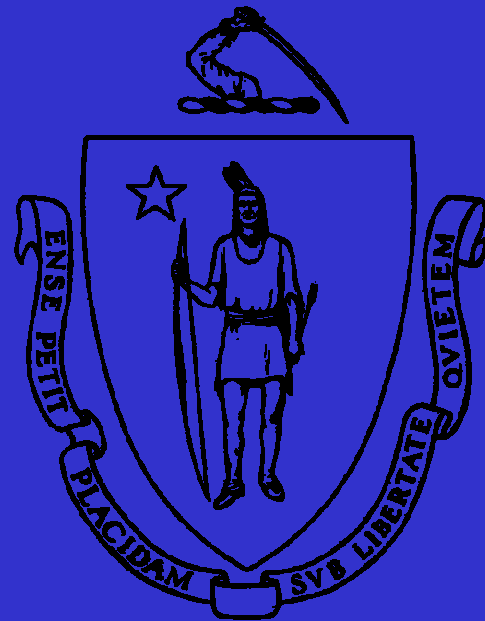


Outreach & Training for the Massachusetts Commercial Energy Code



David Weitz, BBRS

USDOE National Workshop on State Building Energy Codes

Burlington, VT July 17, 2001

Background

- code adopted July 1999, with delay (mandatory effective date July 2001)
- state-mandated utility funding to support energy codes effort (\$350,000 from 1999-2001)
- USDOE grant for management



Outreach Plan

■ target audiences

- design professionals
 - » architects, engineers, interior lighting designers
- building officials
- general contractors
- owners/developers
- product suppliers & manufacturers

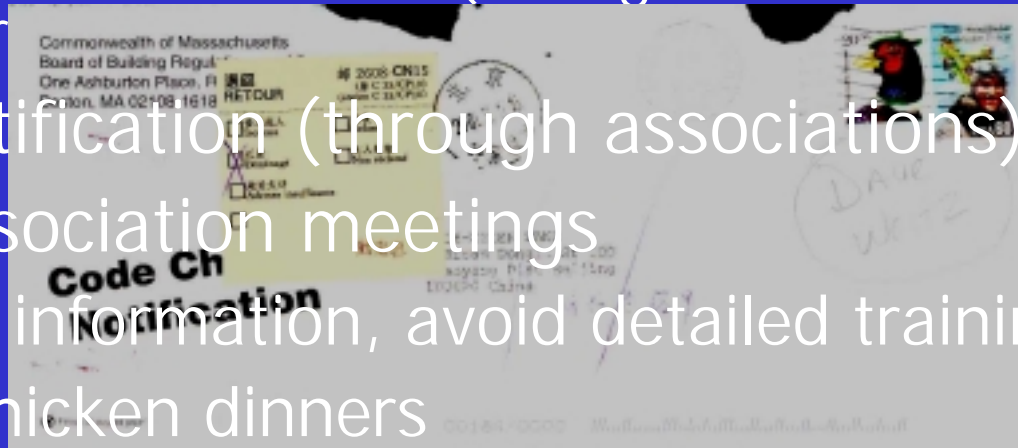
■ develop flyer, poster, print advertising

- announce adoption of code
- highlight new aspects
- list training schedule and registration info



Outreach Plan (cont'd)

- distribute printed materials via:
 - local building departments
 - trade associations (meetings and direct mail)
 - trade publications (ASHRAE, IES, etc.)
 - direct mail from BBRS (all registered architects & engineers)
- e-mail notification (through associations)
- attend association meetings
 - general information, avoid detailed training
 - many chicken dinners



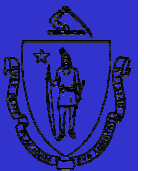
Website

- on-line seminar registration (regularly updated)
- text of the energy code
- code commentary
- seminar presentations (for in-house use)
- software link to PNNL



Training Plan

- select trainers
 - design professionals (peer credibility)
- develop curriculum
 - PNNL materials available
 - input by trainers
 - mix requirements with examples & theory
- free AIA learning units
- registration fees???



Sessions

- separate half-day sessions for three disciplines
 - envelope, HVAC, lighting (admin covered in each)
 - 2 per day in same location
- 1½-hour sessions for COM*check-EZ*
 - 2 per day in different locations
- aggressive schedule
 - 83 technical sessions in 2000
 - 50 technical sessions in 2001
 - 25 software sessions in 2001
 - locations throughout the state
- registration (and admin training) by BBRS
- additional "in-house" sessions by BBRS on request



Two-Way Street

- training is opportunity for feedback
- early 2000 sessions led to several amendments



Attendee Response to Training

(scale of 1 "not at all" to 5 "very much")

- Was the registration service convenient for you? 4.70
- Was the seminar location convenient for you? 4.37

- Was the seminar time convenient for you? 4.51

" GREAT USE OF DOE \$! "

- Were the handout materials helpful? 4.32

- Do you feel that the seminar helped prepare you to use the new code? 4.42

- (scale of 1 "very poor" to 5 "excellent")
- Did the seminar meet your expectations? 4.51

- The trainer's knowledge of the material was... 4.89 4.67 4.67
- Would you recommend this session your colleagues? 4.67

- The trainer's presentation skills were... 4.77 4.55 4.52



Unplanned Support

- requests for BBRS training
 - professional associations (inspectors, AGC, IFMA, IESNA)
 - state agencies
- independent in-house training
 - by colleagues
 - by peers
 - by salespeople



Prepare for "Mythinformation"

- inflated cost estimates
- faulty interpretations
- rumors of repeal



Residential Compliance Study

■ low compliance rates

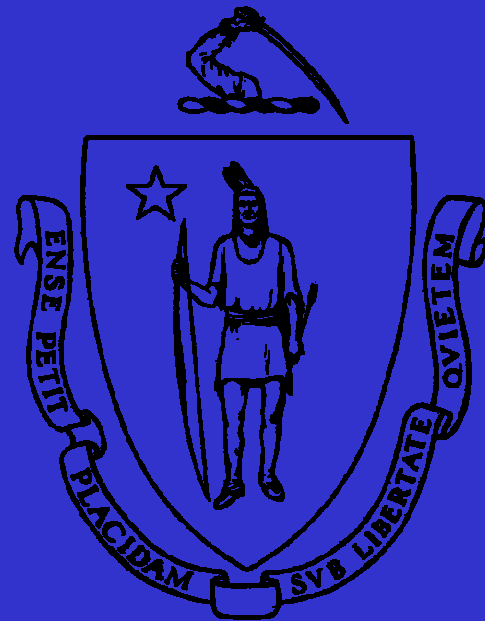
- 46% complied with UA limit...
 - » ...but only 20% exceeded UA by more than 10%
- significant difference in as-built vs. permit documents
 - » area/perimeter measurements differed in 80%
 - » insulation levels differed in 35%
- <20% compliance for penetration and duct sealing
- average heating system 35% oversized

■ significant savings (based on 1995 pre-code baseline)

- 23.4% reduction in heating use
- 5.9% reduction in cooling
- 30.4 tons SO_x; 24.5 tons NO_x; 26,600 tons CO₂



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